



## STATE OF MONTANA JOB PROFILE AND EVALUATION

The job profile is a streamlined position description and may serve as the core document for all human resource functions such as recruitment, selection, performance management and career and succession planning. It was developed, initially, for use in classifying positions in Pay Plan 020.

If you are converting a position to Pay Plan 020 and the position has not changed simply cut and paste the information needed from the current position description. The position description contains sections that are no longer used to classify the position, such as: Working Conditions and Physical Demands; Management and Supervision of Others; Supervision Received; Scope and Effect; and Personal Contacts. These may still be important to the position and may be included in **Section IV – Other Important Job Information**.

When working with a new position, classification request or change to a position in Pay Plan 020, complete the information below to provide the required documentation for classification.

### SECTION I – Identification

Working Title MDT Land Survey Manager		Job Code Number 172017	Job Code Title Engineering Supervisor/Manager
Pay Band 7	Position Number 35004		Check ONE box : <input type="checkbox"/> FLSA Exempt <input checked="" type="checkbox"/> FLSA Non-Exempt
Department Transportation			Division and Bureau Highways & Engineering - Highways
Section and Unit Photogrammetry and Survey – Survey Unit			Work Address and Phone 406-444-6020
Profile Produced By Bryce Larsen, Section Supervisor Brian Cameron, CMS			Work Phone 406-444-6321 406-442-4934

**Work Unit Mission Statement or Functional Description** - This section should include a complete statement of the mission or function as it relates to the work unit.

The Highways & Engineering Division prepares projects for bidding and coordinates highway construction. The Division is made up of Preconstruction and Construction, Engineering Operations, Engineering Aircraft and five District Construction Offices in Missoula, Butte, Great Falls, Glendive, and Billings for budget and workforce purposes. Preconstruction functions are administered by the Highways, Right of Way, Bridge, Consultant Design, and Traffic and Safety bureaus; and the Engineering Information Services Section.

The Preconstruction Program involves planning and developing the details of construction projects. This includes determining the location and design features, conducting public hearings and working with local officials, acquiring property for right-of-way and processing contracts up to the time they are awarded to private contractors. The Highways Bureau is made up of diverse programs in the Road Design, Hydraulics and Photogrammetry & Survey. The Bureau is also responsible for liaison of Tort Claims filed against MDT and CADD Visualization.

The Photogrammetry and Survey Section administers the aerial photography, photogrammetry, and survey programs for the Montana Department of Transportation (MDT). The Helena Survey Unit provides land and control surveying services, formulates and implements MDT survey policy and procedure, develops and administers quality standards and procedures for MDT surveys, secures and manages survey data, serves as the MDT's support and resource center for survey issues and training, and determines and incorporates time efficient and cost-effective survey standards and methods.

### **Describe the Job's Overall Purpose:**

This position serves as the MDT's chief land surveying authority and is responsible for planning and administering the MDT's survey programs to support the successful completion of major statewide right of way, design, and construction projects. As the MDT Land Survey Program Manager, the position develops and administers program plans, policies, and procedures; directs and approves survey activities and results; manages workflow processes and provides budget recommendations; researches and implements new survey methods and technologies; and provides advanced land survey assistance and training to MDT managers and staff. The position also coordinates specialized surveys involving particularly complex or contentious issues and performs a variety of other duties as assigned. The position reports to the Photogrammetry and Survey Section Supervisor, provides direct supervision to professional survey staff (8.0 FTE), and technical oversight to all the district survey crews through the District Surveyor Managers and their survey staff (15 to 25 FTE).

<b>SECTION II - Major Duties or Responsibilities</b>	<b>% of Time</b>
<p>This section should be a clear concise statement of the position's duties. Well written thorough task/duty statements are required here to accurately evaluate the position.</p> <p>1. What are the major duties or responsibilities assigned to this position? What are the specific tasks involved in accomplishing those duties. Group duties in order of importance and estimate the percent of time needed to perform each duty (estimates are not required for individual tasks). <b>NOTE:</b> Because you are identifying <b>major</b> duties usually 3-5, the quantity of time probably will not be less than <b>20%</b>. If a duty is essential but not performed routinely you should list it. For example, lobbying during the legislative session may not take up a large percent of total work time, but can be an essential duty.</p>	

## A. PROGRAM DEVELOPMENT AND ADMINISTRATION

60%

1. Manages the statewide survey program to ensure the overall quality and cost-effectiveness of program operations and services. Develops and administers short and long-range program plans, establishes performance objectives, and ensures that program operations and services meet broader Bureau, Division and Department objectives.
2. Develops and administers survey program policies and procedures to ensure quality and consistency of survey services throughout the agency. Monitors and evaluates the effectiveness of existing policies and procedures; develops new approaches to program issues, technologies, and State and federal requirements; and coordinates with other managers to integrate policies and procedures within the MDT.
3. Develops, implements, oversees and coordinates quality assurance and quality control procedures for surveys to ensure quality, consistency, efficiency, and compliance with department, state and federal standards and policies. Quality control and quality control procedures are developed for geodetic control, project control, photogrammetric control, hydrographic, topographic, legal, land (cadastral), construction, and other types of surveys. This involves establishing QA/QC criteria; implementing, directing and overseeing the MDT survey QA/QC program; determining the acceptability and resolving deficiencies with surveys; and overseeing survey information management and distribution processes. Provides final approval for surveys after evaluation and resolution of deficiencies, inconsistencies, and procedural impediments.
4. Manages survey activities and workflow processes to ensure efficiency, cost-effectiveness, and consistency with project timelines. This involves reviewing and prioritizing projects to account for contract complexity and scope, available staff and material resources, MDT objectives, and other factors. Approves workflow plans and priorities of surveyors and develops ad hoc plans and procedures to accommodate project impediments, seasonal workflow demands, technical and legal requirements, and other issues that continually impact the progress of survey, review and approval.
5. Provides information for the preparation of biennial budgets. This involves forecasting annual expenditures based on factors such as historical expenses, proposed initiatives and ongoing activities, types of planned projects, inflation, changes in survey methods and technologies, and other factors. Develops recommendations for allocations for annual fiscal operational plans and recommends spending priorities by reviewing anticipated projects and expenditures, program goals and objectives, and related personnel and other administrative expenses.
6. Guides and directs MDT's geodetic control survey program. This involves determining MDT and statewide geodetic survey needs; coordinating with federal, state, local and internal interests to establish overall MDT program direction; directing, coordinating, and overseeing surveys for the establishment or re-

establishment of NGS geodetic control marks impacted by MDT construction activities; development and operation of CORS (continually operating reference stations) for enhancement of the NRS (national reference system); and coordinating the development of reports, information sharing, and program planning with internal and outside interests.

7. Researches, develops, and implements new survey methods, procedures, and technologies to improve the efficiency and cost-effectiveness of statewide survey program operations and activities. This involves researching and testing new software applications, survey methods, and equipment; assessing cost and compatibility with existing MDT systems and procedures; and recommending purchase and/or implementation of developmental methods and technologies as appropriate.
8. Through review and analysis of the MDT survey program and input from the Districts and other Bureaus, identifies and determines training and support needs of MDT survey staff. Oversees, prepares, presents, or coordinates training through survey personnel, personnel specialists, training offices, or outside consultants to ensure implementation of modern technologies and operational strategies and to ensure staff competencies in developmental methods, procedures, and technologies. Oversees or provides advanced technical assistance to Survey Unit staff, District Surveyor Managers and/or District survey crews on new standards, specifications, technologies, and survey policy and procedure; adjustment and operation of survey equipment; methods for troubleshooting surveys; and other issues to ensure optimum program performance (e.g., staff, equipment, budgets, etc.). Ensures consistency in the application of statewide support and training for MDT staff and consultants.

## **B. LAND SURVEY PROJECT MANAGEMENT**

**25%**

1. Directs and coordinates land surveys to establish lost or obliterated property and property controlling corners. This involves establishing appropriate corner search methods and procedures for survey crews, researching and analyzing public and private records to determine boundary locations; and approving and signing survey documents (e.g., Certificates of Survey, Certified Corner Recordations, etc.). Coordinates with agency legal staff to evaluate and explain evidence, provide synopsis of survey procedures and results, and provide expert witness testimony regarding land survey issues on behalf of the MDT.
2. Directs and oversees global positioning system/global navigation satellite system (GPS/GNSS) control surveys for the MDT, including densification of Montana's High Accuracy Reference Network (HARN), CORS installations, project control, and a wide range of other surveys according to specific MDT and project requirements. This involves determining survey accuracies; determining appropriate GPS/GNSS methods and standards of accuracy; establishing optimum observation times; allocating and overseeing survey resources; providing training and technical assistance; and analyzing and summarizing (e.g., computation, approval, distribution, etc.) final survey data.

3. Plans and conducts surveys involving complex, contentious, and/or legal issues to ensure the highest standards of quality and efficiency are applied to critical projects. Coordinates with District and headquarter managers, staff attorneys, and others as necessary to assess the nature and context of survey projects, develop strategies to accommodate specialized needs and requirements, and serve as the MDT authority on land survey issues. Provides technical expertise and consultation to other work units (e.g., Right of Way Bureau, Districts, etc.) to resolve advanced technical and procedural problems associated with various survey procedures and results.
4. Directs and oversees survey information management system operations to ensure that survey data is effectively maintained and distributed to appropriate parties (e.g., consultant surveyors, Districts, members of the public, etc.). Directs and coordinates the ongoing development and operation of a geodetic control database and web site with the Preconstruction Bureau, Right-of-Way Bureau, and other state and federal agencies. This includes coordinating with involved parties to determine system functions, establish operational procedures, evaluate and implement system upgrades, and monitor system performance.

## **C. SUPERVISION**

**10%**

1. Supervises professional survey staff by reviewing overall work plans, priorities, and procedures and monitoring progress through meetings and consultations. Conducts staff meetings, disseminates data, and promotes information exchange for support and advancement of Section and Bureau goals.
2. Establishes and approves overall responsibilities and allocation of positions within assigned survey programs. Recommends and justifies requests for additional personnel as necessary.
3. Identifies and recommends survey staffing needs, chairs and serves on hiring committees, and allocates available human resources to adequately support the ongoing program operations and activities. This involves ensuring compliance with State and federal employment and civil rights laws throughout the hiring process, serving on personnel screening and selection committees, reviewing results and making recommendations for hiring, and ensuring proper training and orientation of new employees.
4. Evaluates the performance of positions directly supervised and completes performance evaluations. Recommends, implements, and monitors corrective actions including discipline and termination. Enforces disciplinary policies to ensure consistency in the application of disciplinary actions.
5. Ensures that subordinate staff complies with State and MDT personnel rules, regulations, and policies. Resolves grievances at the lowest level whenever possible.

6. Promotes workplace safety by demonstrating a responsible attitude with regard to the need for workplace safety, modeling ideal behaviors, mentoring, encouraging safe work practices, and participating and providing staff the opportunity to participate in pertinent safety training offered by or through the MDT.
7. Directs and coordinates the outfitting, operation, and maintenance of survey equipment within the Helena Survey Unit, including vehicles, electronic total stations, engineering levels, digital levels, data collectors, CADD workstations, automated systems, GPS/GNSS survey equipment, and other tools and technologies to ensure effective operations. Develops and establishes equipment development and maintenance plans to ensure that modern technologies are available and appropriately utilized and maintained.

#### **D. OTHER DUTIES**

**05%**

1. Performs a variety of other duties as assigned in support of Section and Bureau objectives. Other duties may involve reviewing and commenting on impacts of legislative actions, becoming involved with state survey organizations, and serving on state and national boards and committees dealing with survey issues.

2. Give specific examples of the types of problems solved, decisions made or procedures followed when performing the most frequent duties.

Predominant work of the position involves evaluation of statewide survey policies, procedures, and requirements to develop effective program plans and guidelines that meet MDT needs and objectives. Problems may involve ambiguous or conflicting requirements and objectives, changing methods and technologies, resource limitations, and other issues. Predominant work also involves managing survey workloads; resolving the most complex or contentious issues referred by subordinate staff, District Survey Managers, or other work units; and ensuring the overall quality and cost-effectiveness of survey operations and activities.

3. What do you consider the most complicated part of the job?

The development and administration of MDT's land survey function involves decisions and judgements contingent on statewide construction project timelines and objectives; State and federal regulations, available resources, continually evolving methods and technologies, and workflow efficiency issues. The position is also responsible for directing, conducting, and/or providing guidance on the most complex and contentious survey projects.

4. What laws, regulations, guidelines, manuals or other written established procedures are available to the incumbent?

This position serves as the MDT's chief authority on land surveying and is expected to exercise professional judgement and technical expertise to meet MDT objectives and provide agency managers, legal staff, and others with sound recommendations. General work objectives are outlined by the Section Supervisor. The incumbent is expected to develop and establish priorities and procedures consistent with long-term plans and State and federal requirements. Available references include State and MDT policy and procedures manuals (e.g., ARM, MOM, MCA, etc.), annual program plans, FHWA guidelines, and professional standards (e.g., BLM Manual of Instructions, etc.). Work is reviewed through annual performance appraisals by the Section Supervisor according to the successful accomplishment of program objectives.

5. Which of the duties and/or specific tasks listed under 1 (above) are considered "essential functions" which must be performed by this position (with or without accommodations)? (If you need information or training on the identification of essential functions, please contact MDT Human Resources Division.)

All listed duties and responsibilities of the position are considered essential.

6. If this position supervises other positions, complete the following information.

The number of FTE employees directly supervised is: 8.0.

List the complexity levels/pay bands of each those subordinates: 6, 6, 6, 6, 6, 5, 5, and 4

Please list the Position Numbers for those directly supervised:

32054	35011
35007	35012
98099	35013
35008	35014

Provides technical oversight to District Survey Managers:

90008	91208	92508
91898	90408	

Is this position responsible for (please check ONLY those boxes which apply to the position and for which the position has "signatory" authority.)

- |  |   |
|--|---|
| <input type="checkbox"/> Hiring  | <input type="checkbox"/> Layoffs/termination of temporary or seasonal workers |
| <input checked="" type="checkbox"/> Performance Management (conducting and signing performance appraisals as the direct supervisor or the reviewing manager) |   |
| <input checked="" type="checkbox"/> Direct /Line Supervision   | <input type="checkbox"/> Promotions   |
| <input type="checkbox"/> Other: <b>NONE</b>  | <input type="checkbox"/> Leadworker   |
|  | <input checked="" type="checkbox"/> Discipline                                |

7. Please attach an up-to-date Organizational Chart (or copy from a Power Point document into space below).

Attached.

**SECTION III - Minimum Qualifications** - List the minimum requirements for **first day** of work. (These will be the minimum qualifications utilized for **recruitment and performance management purposes**; this information is not used for classification purposes.)

**Please list the main knowledge and skill areas required for the job:**

Predominant work of the position requires extensive knowledge of the concepts, principles, and developmental applications of land surveying and related mathematics (e.g., geometry, trigonometry, statistics, etc.); legal principles, guidelines, and precedents related to surveying (e.g., Montana Subdivision and Platting Act, Sanitation in Subdivisions Act, Uniform Standards for Monumentation, etc.); case law related to property boundaries; survey computation and data analysis; State and federal survey policy and procedures; and specialized applications of survey instrumentation. Program management requires knowledge of program planning, budgeting, contract administration, and MDT and Bureau objectives.

The position requires knowledge of automated system functions and operations; GPS/GNSS applications; and MDT and State personnel procedures and policies, employment law, and personnel management practices and techniques.

**What behaviors are required to perform the duties?** **NOTE:** Identifying behaviors used for recruitment and selection and other HR functions are part of building a competency model (see **Creating Competency Models** in Guide). A position description will provide helpful information if a model has not been developed. Often “abilities” from the current PD can be stated as desired and observable behaviors. For example, “the ability to communicate clearly in writing” can be restated “writes clearly and concisely”.

**LEADERSHIP:** Offers support and advice on job-related problems; assists others with professional learning and development; and takes initiative to provide guidance and direction to others.

**JUDGMENT:** Commits to a sensible, logical, and valid action after considering alternative actions and their consequences.

**TEAMWORK:** Achieves results by focusing group energies and resources on common goals and objectives. Draws on the talents of all team members and ensure the team has what it needs to succeed.

**ANALYTICAL THINKING:** Defines objectives and establishes appropriate course of action for successful accomplishment. Develops feasible solutions to problems based on logical assumptions and factual observations.

**ACTION-ORIENTED:** Exhibits initiative, energy, and foresight in evaluating and responding to challenging situations, problems, and opportunities.

## **MDT CORE BEHAVIORS**

### **CUSTOMER ORIENTATION/SERVICE**



Creates an atmosphere in which timely and high quality information flows smoothly between self and customer. Encourages open, honest, and constructive expression of ideas and opinions. Demonstrates active listening skills. Uses appropriate body language. Seeks to understand others' viewpoint. Analyzes the customer needs and adjusts to the perspective of the customer, when appropriate.

### **DECISION MAKING**

Independently takes action and responsibility for solving problems. Makes decisions designed to achieve desired outcomes. Challenges the status quo by taking calculated actions in complex, ambiguous, contentious, or hazardous situations to force an issue or set a direction.

### *PERSONAL ACCOUNTABILITY AND OWNERSHIP*

Takes pride in the job. Actively engages in professional self-development opportunities. Accepts individual responsibility for all actions taken.

### **LEADERSHIP**

Shares information, feedback, and knowledge (two-way communication) with key persons inside and outside of the organization to ensure successful project outcomes and/or improvement. Includes training, teaching, and coaching others. Actively steps into a leadership role.

### **ETHICS**

Models high standards of honesty, integrity, trust, and openness. Knows, understands, and follows through with the correct standards of conduct and moral judgment required; is willing to act outside the norm when needed to adhere to ethical principles. Communicates and demonstrates actions in a consistent manner. Respects others, regardless of individual capabilities, agendas, opinions, or needs.

### **FLEXIBILITY AND ADAPTABILITY**

Accepts change as a healthy and normal part of growth. Receptive to new information and recognizes the validity of various viewpoints; sees situations objectively. Responds positively to changes in direction and priorities, responsibilities or assignments. Adjusts to multiple demands, priorities, ambiguity, and change positively. Works effectively within a variety of situations, individuals, or groups.

### **TEAMWORK**

Works cooperatively with others as part of a team as opposed to separately or competitively.

### **CREATIVITY AND PROBLEM-SOLVING**

Generates ideas, fresh perspectives and original approaches; open-minded. Uses creativity and originality when problem-solving. Goes beyond traditional ways to address issues and problems.

**Education and experience:** Please indicate the **minimum educational** requirements for this job, as it relates to a new employee on the **first day** of work (not the educational background of the person now in the position), the specific fields of study that are acceptable, and whether a Master's degree (in which fields) will substitute for any of the required job related experience.

A bachelor's degree in land surveying, geomatics or related field.

Other training (e.g., software, specific machinery, etc.), certification (e.g., CPA, Professional Engineer, etc.), or licensing (e.g., commercial driver's, pilot, psychologist, etc.) required (please specify):

This position requires a Montana Professional Land Surveyor (PLS) license and Montana driver's license. A Certified Federal Surveyor certificate is desirable.

Please indicate the minimum, amount of **job-related work experience** needed as a new employee on the first day of work (not the experience of the person now in the position). Please indicate the specific types of experience that will be considered job-related.

A bachelor's degree in land surveying, geomatics or related field is required along with eight years survey experience; four of these years must be progressively responsible professional land survey experience including experience with full project oversight and program responsibility. Two years of supervisory and program management experience is required. Licensure in Montana as a Professional Land Surveyor and Montana driver's license are required. A Certified Federal Surveyor certificate is desirable. Other related education and experience combinations may be considered.

X This agency will accept alternative methods of obtaining necessary qualifications.

For recruiting purposes please list specific examples of acceptable alternative methods of obtaining those qualifications. **These examples will appear on a vacancy announcement.**

*Other related education:*

A master's degree in surveying or geomatics may substitute for two years of professional land survey experience.

Other bachelor or associate degrees may be considered after review of course work.

#### **SECTION IV – Other Important Job Information**

List any other important information associated with this position, such as working conditions or other factors which are deemed critical or non-negotiable to the position and which will need to be included on the vacancy announcement or other recruitment documents. (This information will be NOT be used for classification purposes.)

Professional surveying responsibilities involve strenuous physical activities, including digging, cutting, hiking, and packing equipment and materials weighing up to 50 pounds. Survey activities are conducted year-round, involving exposure to hazards associated with extreme climatic conditions, remote areas, rough terrain, and traffic. Statewide travel (approximately 6,000 miles annually) and irregular/weekend hours may be required.

#### **SECTION V – Signatures**

My signature below indicates the statements in Section I to IV are accurate and complete.

<b>Employee:</b>		
<b>Signature</b>	<b>Title</b>	<b>Date</b>
<b>Immediate Supervisor:</b>		
<b>Signature</b>	<b>Title</b>	<b>Date</b>
<b>Name:</b>		
<b>Signature</b>	<b>Title</b>	<b>Date</b>
<b>Division/District Administrator:</b>		
<b>Signature</b>	<b>Title</b>	<b>Date</b>
<b>Departmental Designee:</b>	Chief, Employee Relations Bureau, Human Resources Division	
<b>Signature</b>	<b>Title</b>	<b>Date</b>

**Recruitment Review:** My signature below attests to my review of and determination that the minimum qualifications (education and experience) listed in this profile meet the established recruitment standards of MDT.

**Signature**

**Date:**

**Name:**

**Title:** Human Resource Specialist (District/Helena)  
Montana Department of Transportation

**Upon completion of this section the preparer, district human resource specialist, or other signing authority should forward the signed hard copy and the electronic copy of this job profile (JP), along with an Agency Classification Request (ACR) and an up-to-date Organizational Chart (if not included in the body of the JP) to the Chief of the Employee Relations Bureau, Human Resources Division, MDT in Helena.**

**The electronic copy naming convention for JPs sent by the District or from Helena supervisors to Human Resources in Helena should be: (Position#)JP-MDT.doc (e.g., 34015JP-MDT.doc).**